

XVII. NOTES ON SOME SOUTH AMERICAN  
GERRIDÆ (HEMIPTERA).

BY C. J. DRAKE and H. M. HARRIS.

Through the kindness of Dr. W. J. Holland, Director Emeritus of the Carnegie Museum, the writers have been permitted to study a small collection of water-striders from Brazil, Paraguay, and Bolivia, South America. The collection is represented by nine species, two of which are new to science and described below.

Genus GERRIS Fabricius, 1794.

*Gerris* FABRICIUS, Ent. Syst., IV, 1794, p. 187.

*Limnotrechus* STÅL, Öfv. Vet.-Ak. Förh., XXV, 1868, p. 395.

1. *Gerris marginatus* Say.

*Gerris marginatus* SAY, Heter. N. Harm., 1832, p. 36; (Fitch reprint, p. 807; compl. writings, I, 1859, p. 362); Drake and Harris, Ohio Journ. Sci., XXVIII, 1929, p. 271.

Male and female, Pará, Brazil. These two macropterous specimens seem to differ in no appreciable way from numerous specimens of *G. marginatus* from the United States and Canada. Not heretofore recorded from South America.

Genus TENAGOGONUS Stål, 1853.

*Tenagogonus* STÅL, Öfv. Vet.-Ak. Förh., X, 1853, p. 263 (*nomen nudum*); STÅL, *ibid.*, XII, 1855, p. 45.

*Limnometra*, Mayr, Verh. Zool.-bot. Ges. Wien, XV, 1865, p. 444.

2. *Tenagogonus opacus* Champion.

*Tenagogonus opacus* CHAMPION, Biol. Centr.-Amer., Rhynch., II, 1898, p. 150, pl. 9, figs. 16, 16a.

Three females and two males, Chapada, Brazil, August.

Genus LIMNOGONUS Stål, 1868.

*Limnogonus* STÅL, Hemip. Fabr., I, 1868, p. 132; Kirkaldy and Torre-Bueno, Proc. Ent. Soc. Wash., X, 1908, p. 210.

*Limnprotrechus* REUTER, Öfv. Finska Vet.-Soc. Förh., XXV, 1882, p. 40.

3. *Limnogonus hyalinus* (Fabricius).

*Hydrometra hyalina* FABRICIUS, Syst. Rhyng., 1803, p. 258; Champion, Biol. Centr.-Amer., Rhynch., II, 1898, p. 153, pl. IX, fig. 18.

Male, Puerto Suarez, Bolivia, collected by J. Steinbach. Two or three other species of *Limnogonus* have been confused with *L. hyalinus* in the literature.

4. *Limnogonus lotus* White.

*Limnogonus lotus* WHITE, Journ. Linn. Soc. Lond., XIV, 1879, p. 488.

Three specimens, from Santarem, Brazil, Dec. 15, 1909. These examples are somewhat immature, but apparently belong to this species.

5. *Limnogonus recurvus*, sp. nov.

Brownish fuscous to dark brownish fuscous, the abdomen almost blackish. Pronotum darker on the anterior lobe, broadly margined with flavous behind, the sides along the anterior lobe with a broad whitish vitta, two short, broad stripes on the anterior lobe (one on each side of the middle) and a narrow, long, median line extending from the basal portion of the anterior lobe to the apex, yellowish. Head with a transverse line at the base and a longitudinal line on each side near the eyes, yellowish. Abdomen fuscous-black, with a median longitudinal yellowish stripe extending from base of mesonotum to apex. Sides of head silvery pubescent. Connexivum above blackish fuscous, broadly marked with yellowish and silvery pubescence on each segment. Rostrum extending onto basal portion of mesosternum, brownish testaceous, the apical segment black; the first segment almost three times as long as second; third long, extending beyond anterior coxæ; fourth short. Body beneath yellowish testaceous, with sericeous pubescence, the sides of mesothorax below pronotum brownish to brownish fuscous; darker on propleura. Sides of abdomen with a broad brownish black to black vitta. Antennæ brownish fuscous, the terminal segments a little darker, first segment considerably curved near base. Anterior legs brown, the femora moderately incrassate, lighter beneath; tibiæ slightly bowed, a little shorter than femora; tarsi darker. Posterior legs brown. All acetabula, coxæ, and trochanters marked with dark brown. Length, 9.16 mm.; width, 1.60-1.90 mm.

*Male*: Antennal formula, 100:74:56:82. Connexivum very prominently marked with silvery pubescence. Posterior portion of meso- and metasternum strongly depressed in the middle, last ventral truncate, subequal in length to the two preceding segments; first genital segment beneath with a large, rounded, somewhat conical

process in front of the apex, the hind margin triangularly produced with a prominent, ventrally projecting, slightly recurved flattened hook at the tip; the genital segments hairy.

*Female*: Antennal formula, 100:66:55:85. Connexivum marked with yellowish and sericeous pubescence, the median stripe of abdomen a little more prominent than in male. Connexivum broadly triangularly produced beyond the abdomen. Last ventral nearly as long as the two preceding segments, moderately produced at the middle and roundly excavated at the sides. Metasternum strongly depressed behind.

*Holotype*, male, and *allotype*, female, Chapada, Brazil, Aug., H. H. Smith collector, Carnegie Museum. *Paratypes*, one male and four females taken with type, in collections of Carnegie Museum and authors. The macropterous form is unknown. The differently formed male genital segments readily separate this species from its congeners.

#### 6. *Limnogonus profugus*, sp. nov.

Similar to *L. recurvus*, sp. nov. in size, general color and markings, but readily separated from it by the genitalia of male, the different proportional lengths of the antennal segments and the broad black upper margins of the sides of the thorax. Pronotum a little darker anteriorly than in *recurvus*, with a yellowish brown vitta along each side in front, the margins behind the anterior lobe fulvous. Dorsal markings similar to those in *recurvus*. Antennæ dark brown, the terminal segments darker; proportions, 95:67:58:71. Rostrum extending onto basal portion of mesosternum, the apex black. Body beneath reddish brown with sericeous pubescence; sides of abdomen with a broad black stripe, the latter a little broader and darker in the female than in the male. Sides of thorax blackish. Legs dark brown, the base of anterior femora, coxæ and trochanters yellowish brown. Wings brownish black.

*Female*: Last ventral about a half longer than the preceding segment, broadly, deeply, and roundly emarginate on each side, thus leaving the central portion and the connexivum produced and terminating acutely. A little more robust than male.

*Male*: Last ventral very deeply and roundly emarginate at the middle, about one and one-half times as long as the preceding segment. Genital segments plump, without keel or knob, the first segment transversely depressed near the base and roundly excavated at the apex. Length, 10.20-10.60 mm.; width, 1.60 mm.

*Holotype*, macropterous male, Chapada, Brazil, Aug.; *allotype*, female, Chapada, March; both in Carnegie Museum. *Paratype*, Corumbá (highland), Brazil, authors' collection. This species and the preceding are much more robust than *hyalinus* and in addition they have differently formed male and female genital segments.

Genus CYLINDROSTETHUS Fieber, 1860.

*Cylindrostethus* FIEBER, Europ. Hemip., 1860, p. 33.

*Hydrobates* ERICHSON, in Schomburgk's Faun. Brit. Guiana, III, 1848, p. 614 (*Preoccupied*).

7. *Cylindrostethus regulus* (White).

*Hydrobates regulus* WHITE, Journ. Linn. Soc. Lond., Zool., XIV, p. 488.

Nova Olinda, Rio Purús, Brazil, S. M. Klages, June, 1922. Rufotestaceous, with prominent brownish or fuscous markings; antennæ largely brownish black, the apical portion of first segment, except extreme apex, and basal portion of second, lighter; lengths of segments as in the following species. Pronotum with the lateral stripes slightly paler than in *C. linearis*; dorsum of abdomen brownish black with a more or less indistinct median pale line. Connexivum in both male and female terminating in a very short sharp spine. Last ventral of male very broadly, deeply, and roundly emarginated and somewhat depressed at the apex, the sides sinuate; the first genital segment plump, roundly emarginate behind; the last segment terminating in a long sharp spine. Length, 18.50-20.00 mm.

A series of fifteen specimens, collected on the same stream in Brazil as White's types.

8. *Cylindrostethus linearis* (Erichson).

*Hydrobates linearis* ERICHSON, in Schomburgk's Faun. Brit. Guiana, III, 1848, p. 614.

This species may be separated from the preceding by the totally black antennæ, whose proportions (56:23:17:25) are about the same, and the presence of a small elongate patch of rather long, sub-erect, bristly, brown hairs on each side of the mesonotum about one-third of the distance from the base. The thorax with a very broad brownish black stripe on each side; dorsum of abdomen brownish black. Connexivum thickened at apex and drawn out on each side into a rather long spine,

the spines fuscous and coming together at their tips. Female with first genital segment ending above in a short, black-pointed process; last segment with the terminal long spine almost fuscous. First genital segment beneath strongly depressed on each side and with more bristly brown spines near the apex than in the preceding. In *C. regulus* the first genital of the female is plump and the terminal spine is only about two-thirds as long as in *C. linearis*. Length, 19 mm.

Brazanca, Pará, Brazil, Dec. 29, 1909. One female.

Genus BRACHYMETRA Mayr, 1865.

*Brachymetra* MAYR, Verh. Zool.-bot. Ges. Wien., XV, 1865, p. 445.

9. ***Brachymetra albinervis*** (Amyot et Serville).

*Halobates albinervis* AMYOT ET SERVILLE, Hist. Nat. Ins. Hem., 1843, p. 412.

Three examples: Sapucay, Paraguay, April 4, 1909; Rio Coite, Brazil, Nov. 6, 1908.